THE PLANT DISEASE BULLETIN

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Vol. VI. September 1, 1922 Number 5

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FUSARIUM AND HELMINTHOSPORIUM BLIGHTS OF WHEAT

AS REPORTED FROM NORTH DAKOTA

Two interesting reports of these wheat diseases have recently been received from Miss Wanda Weniger of the North Dakota Experiment Station.

"Fusarium blight (Gibberella saubinetii) of seedlings was practically absent this spring, the only specimens received being from Beach in the extreme western part of the state, and from Fargo, from inoculated seed planted later than the general crop.

"Fusarium head blight is apparently absent, no inquiries having been received from over the state as is usually the case in other years. A very small percent of heads have been found infected at Fargo. Dry weather at blossoming time was more or less general for the state."

"Helminthosporium blight was rather common as a seedling blight in the spring.

"On heads and seeds, this trouble is much more abundant this year than last year. Red durums are particularly severely attacked in the Fargo region, and other durums both here at Fargo and from several scattered localities in the state have shown heavy infection. The disease has appeared in fields where no scab developed this year, although these same varieties have scabbed heavily in other years."

REPORTS OF WHEAT DISEASES FROM THE NORTHWEST

The following reports from the Northwestern wheat sections are of particular interest. Bunt appears to be especially important, and the reports of this disease from Washington and Oregon are noteworthy.

Bunt (Tilletia tritici and T. laevis)

Oregon: Present in Willamette Valley at least. Relative abundance not carefully determined. (Barss, August 1).

Appears to be worse than last year due to soil infection because of the dry weather that prevailed generally through the state all through the early fall. Loss of half a million dollars from smut is estimated from Umatilla County, the largest in wheat production in the state (Estimate by County Agent Bennion). (Barss, July 15).

Washington: One hundred eighteen counts of one thousand heads each made on sixty one farms scattered over eastern Washington show an average of 8.4% of smut in the crop. This may be taken as a fair average of the entire acreage. Counts ranged from none to 35% smut by head count. A number of smut explosions have occurred in threshing machines. (Dana, August 15).

Take-all (Ophiobolus cariceti)

Oregon: Present in the Willamette Valley but so scarce this year as to escape general notice. Damage of 1% found by Barss in

one field near Hillsboro is the most damage reported. (Barss, July 15).

Foot rot (Wojnowicia graminis)

Oregon: County Agent Avery at La Grande reports, "I think there is several hundred percent more than last year" in Union County. Not identified from any other section. (Barss, July 15).

Vegetative proliferation in the heads (unknown)

Oregon: From Amity, Dayton, Suver in the Willamette Valley have come specimens of wheat heads showing distorted vegetative shoot production from all the spikelets instead of normal seed. Extent of trouble unknown, probably not common or destructive. (Barss, July 15).

RYE ERGOT IN NORTH DAKOTA

Last year ergot was especially severe on wheat and rye in North Dakota. The following report from that state shows the situation this year:

"With rye harvest over, and many fields already threshed, there has been little report of the occurrence of ergot. Last year there was heavy infection, but this year it is very slight. Locally, there was some ergot, and also evidence of blighting of kernels due to infection by Claviceps. The weather has apparently been unfavorable for germination of sclerotia at Fargo, since various lots of them, overwintered out of doors and also indoors, failed to germinate in the field.

"Some spring rye was found heavily infected at Dickinson July 25, but the winter rye beside it was almost free from infection. Volunteer rye was generally infected. (Weniger, August 15).

BACTERIAL STALK ROT OF CORN REPORTED FROM ILLINOIS

The following report of bacterial stem rot as described by Rosen from Arkansas has been received from Illinois:

"Reported last year and this from Jackson and Monroe Counties. An additional report this season comes from Union County where two fields, one of 8 and one of 10 acres, show an average of 1% of the stalks killed. (Tehon, August 15).

We wish again to call attention to the fact that Professor Rosen, of the Arkansas Experiment Station, has for a number of years been working intensively on this disease and is anxious to receive specimens from as many localities in other states as possible, for comparison with the Arkansas material. Charles S. Reddy, of the Office of Cereal Investigations, 209 Eddy Building, Bloomington, Illinois, is also working on bacterial diseases of corn independently of Professor Rosen.

A BACTERIAL ROT OF CORN REPORTED FROM NORTH DAKOTA

North Dakota: A bacterial rot of field corn has been noticed for the first time in such quantity as this year. In the Fargo section, and also in many separate fields near Dickinson, the trouble I noticed was conspicuous and had attacked about 2% of the plants. The plants appear yellow, and the stalk is dwarfed, rotted with a soft rot which extends from near the ground line to include the undeveloped tassel. (Weniger, August 15).

THE ILLINOIS NATURAL HISTORY SURVEY REPORTS ON CORN DISEASES

Brown spot (Physoderma zeae-maydis)

"Present as far north in Illinois as Woodford County. It is not generally serious, although one instance of a 10% loss has been reported."(Tehon, August 15).

Stewart's disease

"Present where sweet corn is grown for canning. Not generally serious, although two reports show as high as 25% loss this season." (Tehon, August 15).

Root, stalk, and ear rots (Fusarium spp.)

"Present in serious quantities in Illinois. Loss this year may be as much as 8%. The yearly increased acreage of disease free seed, is tending to reduce the disease."(Tehon, August 15).

Rust (Puccinia sorghi)

"Present throughout the state, but is not reported common by our field men. Loss from this cause will be slight."(Tehon, August 15).

Smut (Ustilago zeae)

"Serious throughout the state. Loss will probably be between 3 and 5%."(Tehon, August 15).

LATE BLIGHT REPORTS FROM IMPORTANT POTATO STATES

Maine: Weather conditions during June and the early part of July were extremely favorable for the development of this disease and it appeared early and widely scattered. Dry weather during the latter part of July and early part of August appears to have checked it. To date it has done little damage and may not be serious if the weather remains reasonably dry. (Morse, August 18).

West Virginia: Quite generally distributed in Tucker, Randolph, and Upshire Counties. (Berg, August 1).

Michigan: Specimens received from Oceana County August 4. Rainfall deficient in southern Michigan but rains continue in northern peninsula. No epidemic expected in southern counties. Very dry and hot weather generally prevails over the lower peninsula at this time and the disease, where established, is checked temporarily at least. (Nelson).

Wisconsin: Just starting in northern part of state. More good sprayers in use than ever before. These were purchased privately to spray for leaf-hopper control. (Vaughan, August 1).

Minnesota: No late blight observed. (Section of Plant Pathology, August 15).

EARLY BLIGHT OF POTATOES

New Hampshire: First observed July 1. A few fields badly injured in the southern part of the state. (Butler, August 1).

West Virginia: Slight amounts observed. Apparently causes very little damage except in isolated cases. (Sherwood, August 1).

Wisconsin: Scattering infection in many fields of Green Mountain and Early Ohio. None seen on Rural New Yorker. Not serious. (Vaughan, August 1).

Minnesota: Early blight not very abundant. In one or two fields moderate infection was observed, (northwestern Minnesota). (Section of Plant Pathology, August 3).

North Dakota: Distinct target board lesions have been found in several fields this year, and I think it is safe to say that the disease is much more common than in previous years. Spraying with Bordeaux has not been commonly practiced. Only Early Ohios have been found infected. (Weniger, August 1).

Oregon: Not reported even from the Coast section this year. If present (as probable) is negligible in the state. (Barss, August 1).

BLACKLEG OF POTATOES ABUNDANT IN NORTHERN STATES THIS YEAR

These reports along with those given in other numbers of this Bulletin indicate unusual prevalence of blackleg in some of the more important late potato states:

Maine: More prevalent than for a number of years past. Attributed to the fact that the early part of the growing season was very wet. (Morse, August 18).

New Hampshire: More abundant in Coos County than in any other county. In Coos County present in native stock, in other counties usually present only on Maine seed. (Butler, August 1).

Wisconsin: More than for several years. Only a minor trouble in most fields. (Vaughan, August 1).

North Dakota: Blackleg is more severe in the state this year than we ever thought it would be. Early Ohios are severely attacked, many fields both in the Red River Valley and in the western part of the state being 30 and 50% infected. Tubers were found entirely rotted below the diseased vines as early as July 20, these being large tubers from early plantings. Blackleg and wilt are showing up in the same vines very frequently, as shown by pure cultures. In spite of dry weather for the past month, the slimy rot is very conspicuous on vines and tubers. (Weniger, August 1).

Oregon: General throughout the state. Extent of damage unknown. As high as 30% found in new soil in Clatsop County planted to Netted Gem from Yakima, Washington. Reported as serious in Polk County. Ten percent in Multnomah County according to Fruit Inspector Walker. McKay at Corvallis finds only a small amount even in experimental plots planted to seed from blackleg hills. (Barss, July 15).

TIPBURN AND HOPPERBURN OF POTATOES

West Virginia: Early potatoes in eastern and western sections of state suffered severely from tipburn. Leaf hopper and flea beetle infestations heavy. Trouble hardly so severe in higher altitude sections generally, but locally some severe cases seen. (Sherwood, August 1).

Wisconsin: Hopperburn serious on early varieties. Especially severe in southern and central counties. Rural New Yorker shows little burning at this date. (Vaughan, August 1).

Minnesota: Hopperburn observed in nearly every field in northwestern Minnesota, but not very far advanced in any. Hoppers not as abundant as in the southern part of the state. As much or more physiological tipburn and true hopperburn. (Section of Plant Pathology, August 15).

North Dakota: The past month has been unusually dry throughout the state, but particularly in the vicinity of Fargo. Tipburn began to show about a week ago. Leaf hoppers were observed in several fields doing considerable damage. Many fields are green and plants still growing, so that in all probability, we can expect reports of tipburn to be abundant. (Weniger, August 1).

WISCONSIN, MINNESOTA, AND OREGON REPORT ON POTATO MOSAIC

Wisconsin: Most ever seen. Some plantings of unselected Triumph stock show 100% infected plants. Even the Smith strain shows 2% on the Spooner Branch Station. (Vaughan, August 1).

Minnesota: Mosaic was observed in many fields in northwestern Minnesota. One field of Bliss Triumphs near Solway, Beltrami County, had approximately 50% affected plants. Another Triumph field in the same country had less than 1%. (Section of Plant Pathology, August 15).

Oregon: Generally distributed in all potato sections. Runs as high as 90 to 100% in some places and in large fields in Malheur County is reported as 50% by the County agent. Loss for state undetermined but heavy. (Barss, August 1).

A FEW REPORTS ON SWEET POTATO DISEASES

Black rot (Sphaeronema fimbriatum)

Mississippi: Not near as much black rot infection reported this season as last. Doubtless due to the strict quarantine measures now in force in the state and the general effort being made by many growers to eliminate diseases. (Neal, August 15).

Fusarium wilt (Fusarium batatatis (?)

Delaware: Fusarium wilt has been very prevalent this season. In some fields 70% of the hills are infected. (Adams, August 15).

Pox (Cystospora batata)

Delaware: Lesions appearing on young fleshy roots August 9. (Adams, August 15).

Cottony rot or southern blight (Sclerotium rolfsii)

South Carolina: Reported from four localities, in three of which plantsbeds were infected. (Ludwig, August 15).

White rust (Albugo ipomoeae-panduranae)

Delaware: Very prevalent this season and causing a shot hole effect on old leaves. (Adams, August 15).

EFFECTS OF PROXIMITY OF BLACK WALNUT TO TOMATOES

In 1921 Cook of New Jersey reported wilting of tomato vines in the vicinity of trees, (Phytopath. 11: 346. 1921). Any instances of this kind observed this season should be reported to the Plant Disease Survey for summarizing.

MORE REPORTS OF TOMATO LEAF SPOT

Delaware: First observed July 20. Very prevalent and generally distributed. Heavy rains have favored its distribution. (Adams, August 15).

West Virginia: Generally less than last year except in local sections on early tomatoes. Appeared rather late in eastern section and spread slowly due to generally dry weather. (Sherwood, August 1).

Kentucky: In Henderson, Daviess and McCracken Counties in canning fields of Greater Baltimore. Defoliation so severe that second clusters of fruit

ripen prematurely or small, in some cases sunburning to the extent of being utterly worthless. More rain than usual. Crop cut from 25 to 50%. (Gardner, August 15).

Ohio: Not much in evidence to date, a single outbreak in Lorain County reported. (Young, August 15).

Michigan: Common on late tomatoes. Checked by dry weather in southern Michigan. Effectively controlled by Bordeaux plus resin-fish-oil-soap. (Nelson, August 15).

WEST VIRGINIA, KENTUCKY, AND OHIO REPORT ON FUSARIUM WILT OF TOMATOES

West Virginia: I have seed considerably more than last year, but only in local instances has much damage been caused. (Sherwood, August 1).

Kentucky: Found in Henderson and McCracken Counties. Rather good season (rain) and wilt not yet so prevalent as in 1921. From 5 to 15% except in fields known to be badly infected, up to 75%. United States Department of Agriculture Norton found over 90% free and Norduke wholly so in test field. Norduke not fruiting freely in Henderson County; doing better in McCracken County, drier season. (Gardner, August 15).

Ohio: Numerous reports. Very destructive where susceptible varieties are being grown on infected soil. Considerable interest in resistant varieties manifested by seed dealers and truck growers. (Young, August 15).

REPORTS OF OTHER TOMATO DISEASES

Blossom end rot

Kentucky: Very prevalent in Fayette and Jefferson Counties where rains were relatively light. Upper clusters more affected than first settings of fruit. Earliana variety almost 100%. Bonny Best probably 25%. (Gardner, August 15).

Very common and destructive in dry areas of state. Much more than usual. (Valleau, August 15).

Bacterial spot (Bacterium vesicatorium Doidge)

Michigan: Fifteen rows of Earliana grown in East Lansing from seed obtained from various sources quite generally affected with spot. Not noted on other varieties. (Nelson, August 15).

Grand Rapids disease (Aplanobacter michiganse)

Michigan: Specimens received from Grand Rapids July 24. Commonly the cause of wilted plants in Grand Rapids greenhouses. (Nelson, August 15).

Western yellow blight

Washington: Abundant in the Clarkston section. Not as prevalent about Pullman as usual. No reports from the central irrigated valleys. (Dana, August 15).

BEAN DISEASE REPORTS

Anthracnose (Colletotrichum lindemuthianum)

Vermont: Occasional infections on leaves and stems but the very dry July (since July 3) has checked it and the pods are not diseased to any extent, although more of course than last year when it was hard to find a specimen. (Lutman, July 15).

New Jersey: Very common but not more destructive than usual. (Cook, July 15).

West Virginia: I have observed generally less than last year, though in some local sections in central part of state very heavy infection occurred. (Sherwood, August 15).

Oregon: Not reported this year except from Umatilla where Bennion reports it as slight. (Barss, July 15).

Mosaic (cause undetermined)

Minnesota: The only reports we have of bean mosaic are from Ramsey County. Careful counts have been made in home gardens and truck gardens in this region, and 8-50% of the plants have been found to be infected with mosaic. (Section of Plant Pathology, July 15).

Idaho: Mosaic on beans about as usual. This is the most serious bean disease in the state. (Hungerford, August 1).

Oregon: Reported from Marion, Benton, Umatilla, and Klamath Counties. Probably general but damage resulting difficult to estimate. (Barss, July 15).

Root rot (cause unknown)

Kentucky: On several occasions I have examined the root systems of bean plants at about the time of first podding or after and have found the fiberous roots dead. The plants become yellow and sickly. (Valleau, August 15).

DOWNY MILDEW OF CUCURBITS

Cucumber

Delaware: Prevalent in late planted fields. (Adams, August 15).

Florida: Very important, known to occur near Sanford and southward. First appeared in March at Winter Garden and later at Sanford, most injurious from March to June, during the heaviest fruiting season. Weather dry, but heavy dews favored development. (Foster, August 7).

Mississippi: Reported from Prentiss County as causing considerable loss in gardens. (Neal, August 1).

Cantaloupe

New Jersey: Abundant. (Cook, August 15).

Delaware: First observed July 26. Has been very prevalent this season and on late planted fields has cut yield 50%. (Adams, August 15).

Georgia: Downy mildew has been most serious in the southern part of the state. The extremely humid summer has greatly facilitated its growth and its spreading. Spraying has not been very effective on account of the rains. (McHatton, August 1).

Watermelon

Delaware: Very prevalent this season and will prevent normal yield in many fields. (Adams, August 15).

WATERMELON ANTHRACNOSE (Colletotrichum lagenarium)

Delaware: Leaf and fruit infection August 4. Very prevalent. (Adams, August 15).

Virginia: General and especially severe following prolonged wet spell. (Fromme, August 15).

West Virginia: Fruits in market badly pitted and yellowish. The yellowing indicates that the foliage had been killed so that the melons were exposed to strong sunshine. Quite a number of the melons were also undeveloped at the stem end. (Morgantown). (Sheldon).

South Carolina: Very prevalent in the commercial watermelon growing section. The observations were made too early in the season to give an estimate of the extent of loss, however. (Ludwig, August 15).

Georgia: Very serious in 1922; common in practically all fields causing losses of from 20 to 100%. Many seeds treated but no spraying done and the rainy season played havoc. Not possible to estimate percentage loss to whole crop. (McHatton, July 15).

Mississippi: Many reports have been received this season as to the prevalence of anthracnose. The disease was especially severe at Sandersville, Jones County, resulting in a high percentage loss. The season has been very favorable for the development of the disease. (Neal, August 15).

A FEW REPORTS OF WATERMELON WILT

Virginia: More complaints than I have had in any previous year. (Fromme, August 15).

South Carolina: Present in several places and serious where it occurs. (Ludwig, August 15).

Georgia: General in gardens and where rotations are not followed. Commercially not so serious. (McHatton, July 15).

Arizona: Specimens sent in from Glendale. Considerable loss in Salt River Valley reported to be due to this disease. (Brown, June 20).

CANTALOUPE DISEASES

Leaf blight caused by Alternaria brassicae nigrescens

Georgia: Cantaloupes badly affected by Macrosporium blight. Some fields ruined. Many immature cantaloupes being shipped. (Robb, June 8).

Delaware: Generally prevalent but not a serious disease under our conditions, July 21. (Adams, August 15).

Bacterial wilt caused by Bacillus tracheiphilus

Delaware: First observed July 20. Very little of this disease appeared. (Adams, August 15).

West Virginia: Very prevalent and destructive. This trouble on both cantaloupes and cucumbers sometimes causes almost total destruction of crop. (Sherwood, August 15).

Ohio: Of general distribution in the state, apparently quite destructive this season. (Young, August 15).

Michigan: Very generally reported in southern Michigan. Striped beetles abundant again this year and active in spreading the disease. (Nelson, August 15).

Anthracnose caused by Colletotrichum lagenarium

South Carolina: Widespread in commercial cantaloupe growing section in southern part of the state. Observations were made by L. E. Tisdale before the harvest season and it is not possible to say how much damage was sustained. (Ludwig, August 15)

Rot caused by Sclerotium rolfsii

South Carolina: Reported from one farm as causing a reduction of about 20% in yield. Apparently not serious in many places but quite common in small amounts. (Ludwig, August 15).

Leaf spot caused by Cercospora cucurbitae

Delaware: Very prevalent June 28. (Adams, August 15).

Mosaic (cause undetermined)

Delaware: First observed in a field of transplants (Rocky Ford) June 29. Very prevalent. (Adams, August 15).

SUGAR CANE MOSAIC SITUATION IN MISSISSIPPI

"The disease is now present in practically all counties south of Meridian and Jackson, ranging from a trace to 100% in these fields. No data as to amount of damage." (Neal, August 15).

VALLEAU OF KENTUCKY REPORTS ON TOBACCO DISEASES

Mosaic (cause undetermined)

"Mosaic is by far the most important leaf disease in the Burley section of Kentucky this year. In 56 fields where counts have been made the plants have been infected to the extent of 14%. In some cases infection has run as high as 90%. In 23 of the fields infection was 2% or less. These counts were made at a time when the mosaic could be definitely attributed to infection at setting time, indicating seed bed infection. In several cases the disease was found in the beds and in one case more carefully studied mosaic Physalis virginiana and Solanum carolinense were found in a bed from which approximately 30% of the plants showed infection within a month. We have transferred mosaic from Physalis virginiana, Solanum carolinense, tomato, tobacco, and Physalis heterophylla to tobacco under controlled conditions and have failed to transfer it from soy beans and pokeweed. The mosaic causes losses for two reasons. First, the plants infected at setting time are all small and stunted; and second, there is very severe burning of the lower leaves of these plants and also on the lower leaves of plants infected later in the field. This type of burning has been improperly spoken of as wildfire by many growers in the Burley section this year.

"In the hilly sections of Kentucky where there is an immense area open for seed beds where tobacco has never been grown, mosaic is difficult to find in many fields. In 15 fields examined in Marion County mosaic was serious in only one." (August 15).

Angular spot caused by Bacterium angulatum

"In the Burley section angular leaf spot is present in over half of the fields, but causing very little injury because of the almost continuous dry season. In the Dark section in western Kentucky, reports of injury from the bacterial leaf spot diseases are common. They have had a wet season." (August 15).

Root rot caused by Thielavia basicola

"Root rot of tobacco is causing its usual injury in the Burley section of Kentucky. A survey of 106 fields up to the present has shown 61 infected and 45 with no sign of root rot. A record was made in some cases of the history of the field. Old blue grass sod never in tobacco, 2 infected and 19 uninfected fields; old blue grass sod in tobacco in 1921 and 1922, 7 infected and 2 uninfected fields; tobacco for past seven years, 30 infected and 11 uninfected fields; no tobacco in past seven years, but in soil previously, 9 infected and 6 uninfected fields.

"Through Mr. Ralph Kenney, we have tested out a few resistant strains of stand up white Burley. Of 66 of the demonstrations so far tabulated the resistant selection was larger than the common variety in 38 cases and the same as the common variety in 28 cases. The common variety strain was larger than the resistant in 2 cases. The value of the resistant stand up types is very evident." (August 15).

Wildfire caused by Bacterium tobacum

"(Burley section) Wildfire has been found in about 8% of the fields so far examined. It was causing damage only in a single field." (August 15).

BROWN ROT OF PEACH AS REPORTED FROM VARIOUS STATES

New Jersey: Abundant. (Cook, August 15).

Delaware: Very prevalent on Belle of Georgia and Hale. Fruit infection first observed June 7. (Adams, August 15).

Virginia: About average severity. (Fromme, August 15).

Kentucky: This disease was serious in early plums and peaches, but those ripening at this time are practically free from rot. Weather is dry and hot. (Valleau, August 15).

South Carolina: Some blossom blight and twig cankers on Station farm. Fruit rot apparently less than last year. No observations at other locations in the state. County agent of Florence County reports the disease very bad. (Ludwig, August 15).

Georgia: General and serious. Spraying controlled in commercial crop; in small and unsprayed plantings practically a total loss. (McHatton, July 15).

Mississippi: Widely prevalent in the state where spraying schedules have not been consistently followed. Damage at least 20 to 25% for the entire state. Some orchards observed this season which were a total loss from brown rot infection. (Neal, August 15).

Arkansas: More than usual. Common on unsprayed fruit. (Elliott, July 1).

Illinois: Has caused no injury on the fruit in the orchards to date. (Anderson, July 1).

PEACH SCAB CAUSED BY CLADOSPORIUM CARPOPHILUM

New Jersey: Abundant. (Cook, August 15).

Delaware: Very prevalent, first observed June 21. (Adams, August 15).

Virginia: Unusually prevalent. (Fromme, August 15).

Kentucky: Coincident with crop. Very serious. Where spraying is not practiced, peaches dry out before ripening. (Valleau, August 15).

Georgia: General. In commercial orchards 5-10% infection. In uncared for plantings from 80-100% infection. (McHatton, July 15).

Mississippi: Reported from Stone, Lauderdale, Washington, and Grenada Counties. Mostly twig infection. Damage not given. As a rule, the disease is less this year. (Neal, August 15).

Arkansas: Much more severe than usual; on all unsprayed fruit. Especially severe on Belle of Georgia. (Elliott, July 1).

Illinois: Scab has been unusually prevalent this season, but is of little economic importance. There may be local losses this season. Unsprayed orchards of susceptible varieties will suffer heavy losses. These are few. (Anderson, July 1).

REPORTS OF BACTERIAL SPOT OF PEACH

Delaware: Bacterium pruni was a serious leaf infection in May and June and subsequent defoliation has prevented normal growth of fruit. Complete fertilizer with summer application of nitrate of soda has assisted in checking disease. A spring and summer application of nitrate of soda has been effective on light soils. (Adams, August 15).

South Carolina: This seems to have been quite widespread this season and in some places to have caused considerable defoliation. My observation on some nitrate treated and check plots this season leads me to believe that fertilization with nitrate does not induce greater resistance. It does stimulate leaf production, though, so that the same loss of tissue due to the spots or to defoliation is not so serious to the fertilized trees. A better control measure is needed, but fertilization is worth while. Seemed to be worse early in the season this year. (Ludwig, August 15).

Kentucky: Caused severe injury to leaves in early part of season. Many trees in Station orchard nearly defoliated. These put out new leaves free from infection and are ripening their fruit normally. Very few fruits are spotted. (Valleau, August 15).

Mississippi: Reported from Harrison, Lauderdale, and Madison Counties. Damage not given. (Neal, August 15).

Arkansas: Common on poorly kept trees. (Elliott, July 1).

Illinois: Not as serious in southern portion of state as anticipated. Central section shows serious infection on leaves. The disease appeared on the fruit about June 20. Do not anticipate much loss. (Anderson, July 1).

OTHER PEACH DISEASES

Root knot caused by Heterodera radicicola

South Carolina: Present. No data on loss. (Ludwig, August 15).

Mississippi: Very common and serious on nursery stock. One nursery near Meridian revealed at least 75% infection. On the whole a very serious disease problem for the nursery men in many localities of the state. (Neal, August 15).

Mildew caused by Sphaerotheca pannosa

Oregon: Reported as serious on several Elberta trees in a Hood River orchard. Specimen also received from Washington County. In general, not economically important. (Barss, July 15).

Blight and fruit spot caused by Coryneum beijerinckii

Oregon: General throughout western Oregon. Twig and bud damage last winter about average. Dry spring weather has resulted nearly everywhere in apparent absence of fruit spotting thus far. Easily controlled by early fall spray of Bordeaux but so much neglected that in some sections unsprayed trees may suffer 35% damage. (Barss, July 1).

Phony peach (cause unknown)

Mississippi: A typical case of the so-called "Phony" disease was observed this season near Enterprise, Clark County. (Neal, August 15).

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